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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,748	09/25/2003	Cheol-Hee Moon	P56909	4498
7590	07/13/2005		EXAMINER	
Robert E. Bushnell Suite 300 1522 K Street, N.W. Washington, DC 20005			COLON, GERMAN	
			ART UNIT	PAPER NUMBER
			2879	

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary	Application No. 10/669,748	Applicant(s) MOON, CHEOL-HEE	
	Examiner German Colón	Art Unit 2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-12,14 and 17-20 is/are rejected.
- 7) ☒ Claim(s) 3,4,7,8,13,15 and 16 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6/1/04</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Objections

1. Claims 7-8 are objected to because of the following informalities:

The claims recite the limitation “*the* conductive wires”, however, there is insufficient antecedent basis for this limitation in the claims.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 2, 5, 6, 8, 9, 11 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Asano et al. (US 6,008,582).

Regarding claim 1, Asano discloses a PDP, comprising (see Figs. 4 and 5 in view of Fig.

1):

a front substrate **10** and a rear substrate **3** opposing one another with a predetermined gap therebetween;

a plurality of display electrodes **4,5** formed on the front substrate;

a dielectric layer **6** formed on the front substrate covering the display electrodes;

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a plurality of first barrier ribs **1a,1b,1c** and a plurality of second barrier ribs **52a,52b,52c** formed on the rear substrate essentially perpendicular to each other forming an array of discharge cells **2a**, each discharge cell being completely surrounded by said first and second barrier ribs;

a plurality of phosphor layers **9** formed in the discharge cells; and

a plurality of electrically conductive address electrodes **8** being formed orthogonal to the display electrodes in the discharge cells, said address electrodes being parallel to said first barrier ribs.

Regarding claim 2, Asano discloses the address electrodes being coated with a dielectric material (see Col. 4, lines 43-44).

Regarding claim 5, Asano discloses a height t_2 of the second barrier rib being less than a height t_1 of the first barrier ribs (see Figs. 4-5).

Regarding claim 6, Asano discloses a phosphor layer **9** being coated on an outer circumference of the dielectric material coating the address electrode (see Fig. 1 in view of Col. 4, lines 43-44).

Referring to claim 8, Asano discloses conductive wires forming the address electrodes being polygonal in cross section (see Fig. 1).

Referring to claim 9, Asano discloses the discharge cells **2a** defined by the first and second barrier ribs having a polygonal shape (see Figs. 4-5).

Referring to claim 11, Asano discloses the discharge cells defined by the first and second barrier ribs being rectangular and staggered to discharge cells on an opposite side of a first barrier rib (see Figs. 4-5 in view of Fig. 1).

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Referring to claim 20, Asano discloses the address electrodes being realized through electrically conductive wires.

4. Claims 1, 12, 14, 17 and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Kato et al. (US 6,670,757).

In regards to claims 1 and 12, Kato discloses a PDP comprising (see at least Figs. 7, 9, 25 and 26):

- a front substrate **10** and a rear substrate **20** opposing one another with a predetermined gap therebetween;

- a plurality of display electrodes **41,42** formed on the front substrate;

- a dielectric layer **11** formed on the front substrate covering the display electrodes;

- a plurality of barrier ribs formed on the rear substrate comprising a plurality of first barrier rib members **21** formed in a direction orthogonal to the display electrodes, and a plurality of second barrier rib members **23** formed in a direction parallel to the display electrodes, the first barrier rib member intersecting the second barrier rib members (see at least Fig. 7, in view of Col. 11, lines 28-35), the plurality of barrier ribs forming an array of discharge cells, each discharge cell being bounded by a pair of first barrier rib members and a pair of second barrier rib members;

- a phosphor layer **22** being formed in respective discharge cells; and

- address electrodes **31** comprising conductive wires and coated with a dielectric material **24**, the address electrodes being mounted on the second barrier rib members (see Col. 11, lines 28-35), the address electrodes being orthogonal to the display electrodes.

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In regards to claim 14, Kato discloses a height t_2 of the second barrier rib member being less than a height t_1 of the first barrier rib member (see at least Fig. 7 in view of Col. 11, lines 28-35).

In regards to claim 17, Kato discloses a phosphor layer **22** being coated on an outer circumference of the dielectric material coating the address electrode (see Fig. 7).

In regards to claim 19, Kato discloses the conductive wires forming the address electrodes having a polygonal cross section (see at least Fig. 25).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asano et al. (US 6,008,582).

Regarding claims 7 and 10, Asano discloses the claimed invention except for the limitation of the address electrodes having a circular cross section and the discharge cells having a circular shape.

However, it has been held that a change in shape is generally recognized as being within the level of ordinary skill in the art. Thus, it would have been obvious to one having ordinary skill in the art to provide the address electrodes with a circular cross section and the discharge cells with a circular shape, since such a modification would have involve a mere change in the

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shape of a component. See for example Kao (US 6,495,967) and Kunii (US 6,608,441) for evidence of discharge cells having a substantially circular shape; and Moore (US 6,459,200) for evidence of wire electrodes having a substantial circular cross section.

7. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. (US 6,670,757).

Regarding claim 18, Kato discloses the claimed invention except for the limitation of the address electrodes having a circular cross section.

However, it has been held that a change in shape is generally recognized as being within the level of ordinary skill in the art. Thus, it would have been obvious to one having ordinary skill in the art to provide the address electrodes with a circular cross section, since such a modification would have involve a mere change in the shape of a component. See for example Moore (US 6,459,200) for evidence of wire electrodes having a substantial circular cross section.

Allowable Subject Matter

8. Claims 3-4, 13 and 15-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter:

Referring to claims 3-4 and 15-16, the references of the Prior Art of Record fail to teach or suggest the combination of the limitations as set forth in the claims, and specifically comprising the limitation of "fixing grooves formed in edges of the rear substrate at areas

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corresponding to terminal areas of each of the address electrodes, the fixing grooves securing terminal ends of the address electrodes and further secured by an adhesive member”.

Referring to claim 13, the references of the Prior Art of Record fail to teach or suggest the combination of the limitations as set forth in the claim, and specifically comprising the limitation of “grooves being formed in distal ends of the second barrier rib members into which the address electrodes are inserted”.

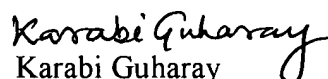
Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to German Colón whose telephone number is 571-272-2451. The examiner can normally be reached on Monday thru Thursday, from 8:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Nimesh Patel can be reached on 571-272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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